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(54) **HEATING PLASMA FOR FUSION POWER USING MAGNETIC FIELD OSCILLATION**

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(57) **ABSTRACT**

In one embodiment, a fusion reactor includes two internal magnetic coils suspended within an enclosure, a center magnetic coil coaxial with the two internal magnetic coils and located proximate to a midpoint of the enclosure, a plurality of encapsulating magnetic coils coaxial with the internal magnetic coils, and two mirror magnetic coil coaxial with the internal magnetic coils. The fusion reactor is configured to vary electrical currents supplied to the magnetic coils to heat the plasma confined within the magnetic wall.